Warehouse Management System Process Flow Guide

Introduction: Warehouse Management System

A Warehouse Management System (WMS) is a software solution that helps organizations manage and control warehouse operations efficiently. It tracks inventory, manages warehouse processes, and ensures accurate stock movement from receiving to shipping. WMS improves operational efficiency by automating manual tasks and providing real-time visibility into warehouse activities.

Key Objectives of WMS

- Improve inventory accuracy
- Optimise warehouse space utilisation
- Increase order fulfillment speed
- Reduce operational errors
- Enhance supply chain visibility
- Improve labor productivity

Benefits of Implementing WMS

- Real-time inventory tracking
- Reduced operational costs
- Faster order processing
- Better warehouse organisation
- Improved customer satisfaction

Core Warehouse Operations Managed by WMS

- Receiving
- Put-away
- Inventory Management
- Order Picking
- Packing
- Shipping
- Reporting and Analytics

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Inbound Process Flow

Purchase Order Creation

The procurement team creates a Purchase Order (PO) in the system for incoming goods from suppliers.

Goods Arrival

The supplier delivers goods to the warehouse. Warehouse staff verifies the shipment against the purchase order.

Goods Receiving

Warehouse operators receive goods using handheld scanners or terminals.
Steps include:

- Verify shipment details
- Scan product barcodes
- Record quantities received
- Identify damaged items

Quality Inspection

Goods may undergo quality checks depending on company policies.
Inspection activities may include:

- Physical inspection
- Quantity verification
- Product condition validation

Put-Away Process

Once approved, goods are assigned storage locations within the warehouse.
The WMS automatically recommends optimal storage locations based on:

- Product type
- Available space
- Warehouse layout
- FIFO/FEFO rules

Warehouse operators move goods to designated locations and confirm storage using barcode scanning.

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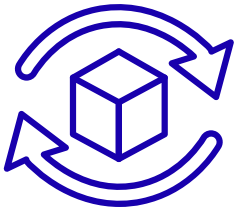
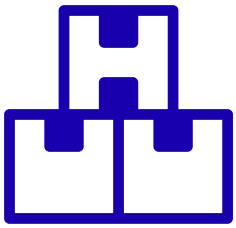
Inventory and Order Fulfillment Process



1. Inventory Management

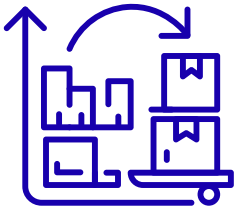
The WMS continuously tracks inventory movements within the warehouse.

- Key inventory functions include:
- Stock level monitoring
- Inventory adjustments
- Cycle counting
- Stock transfers between locations



2. Order Management

Customer orders are received through ERP, e-commerce systems, or order management platforms and automatically integrated into the WMS.



3. Order Picking

Warehouse staff pick items from storage locations according to picking lists generated by the system.
Common picking strategies include:

- Single order picking
- Batch picking
- Zone picking
- Wave picking
- Barcode scanning ensures accuracy during item selection.

4. Packing

Picked items are packed according to shipment requirements.
Packing tasks include:

- Verifying picked items
- Packaging products safely
- Printing shipping labels
- Generating packing lists